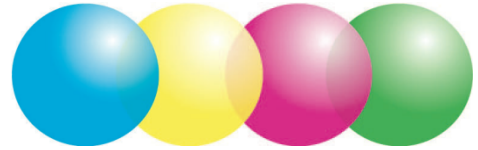


# SEACHANGER



## SeaChanger Plasma Profile and Wash Installation and Operation Manual

Document Number **6-2013 Plasma**

SEACHANGER



a product of

**PIXELTEQ**

By Ocean Thin Films  
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[www.pixelteq.com](http://www.pixelteq.com)

## FCC Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

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### Trademarks

SeaChanger Plasma Profile and Wash is a trademark of SeaChanger/Ocean Thin Films, Inc. Source Four is a registered trademark of Electronic Theatre Controls, Inc. (ETC). All other products and services mentioned herein are the trademarks, service marks, registered trademarks, or registered service marks of their respective owners.

### Limit of Liability

Every effort has been made to make this manual as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an "as is" basis. SeaChanger Plasma Profile and Wash shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this manual.

# Important Safety and Warranty Notices

## Safety Information

Please read all instructions prior to assembling, mounting, and operating this equipment.

## Product Modification Warning

SeaChanger Plasma Profile and Wash products are designed and manufactured to meet the requirements of United States and International safety regulations. Modifications to the product could affect safety and render the product noncompliant to relevant safety standards.

Modification des produits d'alerte

SeaChanger produits sont conçus et fabriqués pour répondre aux exigences des Etats-Unis et réglementations internationales de sécurité. Les modifications au produit pourrait affecter la sécurité et rendre le produit non conforme aux normes de sécurité applicables.

## Warranty Information

Limited Warranty

Unless otherwise stated, your *product unit* is covered by a one-year parts and labor limited warranty.

Dichroic filters are not guaranteed against breakage or scratches to coating. It is the owner's responsibility to furnish receipts or invoices for verification of purchase, date, and dealer or distributor. If purchase date cannot be provided, date of manufacture will be used to determine warranty period.

## Returning an Item Under Warranty for Repair

It is necessary to obtain a Return Material Authorization (RMA) number from your dealer or point of purchase BEFORE any units are returned for repair. The manufacturer will make the final determination as to whether or not the unit is covered by warranty. All product units or parts returned to SeaChanger must be packaged in a suitable manner to ensure the protection of such product units or parts. This packaging must be clearly and prominently marked to indicate that the package contains returned product units or parts and must also display its RMA number. Accompany all returned product units or parts with a written explanation of the alleged problem or malfunction. Ship returned product units or parts to: SeaChanger, 8060 Bryan Dairy Road, Largo, Florida, 33777.

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Note

***Freight damage claims are invalid for fixtures shipped in non-factory boxes and packing materials.***

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## Freight

The purchaser will pay all shipping charges. Items under warranty shall have return shipping paid by the manufacturer only in the continental United States. Under no circumstances will freight collect shipments be accepted. Prepaid shipping does not include rush expediting such as airfreight. Airfreight can be sent customer collect in the continental United States. REPAIR OR REPLACEMENT AS PROVIDED FOR UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. SEACHANGER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO ANY PRODUCT, AND SEACHANGER SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Warranty is void if the product is misused, damaged, modified in any way, or for unauthorized repairs or parts. This warranty gives you specific legal rights; you may also have other rights, which vary from state to state.

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# About This Manual

## Document Purpose and Intended Audience

This document provides you with an installation section to get your SeaChanger Plasma Profile and Wash up and running.

## Document Summary

Chapter	Description
Chapter 1: <a href="#">Features</a>	Provides a list of product features.
Chapter 2: <a href="#">Setup and Configuration</a>	Contains instructions for unpacking, installing and configuring the SeaChanger Plasma Profile and Wash.
Chapter 3: <a href="#">Operation</a>	Contains instructions for using the SeaChanger Plasma Profile and Wash.
Appendix A: <a href="#">SeaChanger Plasma Profile and Wash Specifications</a>	Provides product specifications.
Appendix B: <a href="#">Maintenance</a>	Provides for cleaning the SeaChanger Plasma Profile and Wash dichroics.

## Product-Related Documentation

You can access the most recent documentation for SeaChanger Plasma Profile and Wash by visiting our website at [www.SeaChangerOnline.com](http://www.SeaChangerOnline.com).

## Upgrades

Occasionally, you may find that you need SeaChanger to make a change or an upgrade to your system. To facilitate these changes, you must first contact Customer Service and obtain a Return Merchandise Authorization (RMA) number. Please contact SeaChanger for specific instructions when returning a product.

# Chapter 1

## Features

### **SeaChanger Plasma Profile and Wash Color Engine**

The SeaChanger Plasma Profile and Wash Color Engine is the first SeaChanger color-changing fixture with a LIFI® plasma light source. SeaChanger Plasma Profile and Wash gives you the freedom to mix any color as well as perform live fades from one color to another smoothly, silently, and cleanly.



The SeaChanger Plasma Profile uses the front barrel assembly of the Source Four, and does not interfere with the gate area. You can still use patterns, irises, gobo changers, and all the usual accessories with your Source Four fixture. The SeaChanger Plasma fixtures do not include any ETC components including yokes, optical barrels or barrel assemblies. The SeaChanger Plasma Wash while shipped as a stand- alone lighting fixture, will require an optional yoke.

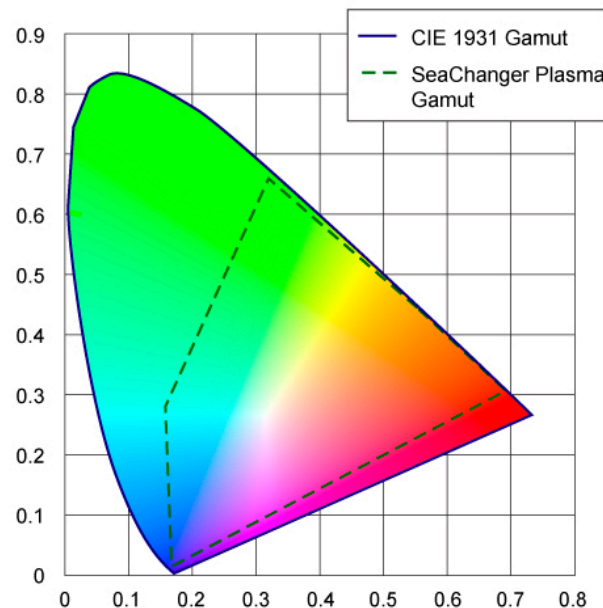
The SeaChanger Plasma Profile and Wash use dichroic borosilicate glass, which will not fade or change color. So, the color you create during rehearsals is the same color you will see a week, a month, or a year later. And, there are no gel scrolls to burn out or replace.

The SeaChanger Plasma Profile and Wash are available only in the standard “Dimmer” configuration.

## SeaChanger Plasma Profile and Wash Features

SeaChanger Plasma Profile and Wash Color Engine offers the following features:

- High-efficiency dichroics – Less light loss with dichroic color than with a gel, and unlike gels, will never fade or wash out
- No interference with Source Four optics – Can be used with any lens type-Profile
- Smooth color mixing – Includes pastel and saturated colors
- Installs in seconds with quick bayonet mounting to your Source Four front-end lens barrel-Profile
- Onboard drive electronics feature adaptive speed response algorithms giving full control over color mixing from smooth, step-less movement to rapid color snaps and bumps
- Live color fading from one color to another at any speed with no strange, intermediate colors
- No interference with Source Four's gobos, irises, or gobo rotators-Profile
- Operates on six DMX channels: Cyan, Magenta, Yellow, Dimmer Wheel, Power Draw Down, and Remote Lamp Strike



SeaChanger Plasma Profile and Wash Color Gamut



# Chapter 2

## Setup and Configuration

### Unpacking the Products

Unpack your SeaChanger products and verify that they are undamaged. If there is no damage, continue with the rest of the setup procedure. If there is damage, notify both the shipping agent and the sales agent immediately.

Save the shipping carton and packing materials. The carton and packing materials are specifically designed to protect the product during transport. Return a product for repair in its original shipping carton and packing materials. SeaChanger Plasma Profile and Wash assumes no responsibility for products that are damaged during transport. Before returning anything to the factory, call for a Return Material Authorization (RMA) number. SeaChanger cannot accept any goods shipped without an RMA number. See

[Returning an Item Under Warranty for Repair.](#)

### Package Contents

The SeaChanger Plasma Profile and Wash Color Engine ships with the following items:

- User manual: on line at [www.seachangeronline.com](http://www.seachangeronline.com)
- Safety cable

### Optional Accessories

The following accessories are available from SeaChanger:

- Extended Yoke for down lighting or Front Of House installations
- Double Clutch Friction plates on both sides of the fixture to add to overall stability
- DMX Terminators to terminate the string of DMX lines to the fixtures
- Factory Installed Edison or Stage Pin plugs and High Temperature cords

## SeaChanger Plasma Profile and Wash Setup

Setting up the SeaChanger Plasma Profile and Wash involves installing the proper power cord cap and setting the DMX start channels.

Color	Function
Green with Yellow stripe	Ground
Blue	Neutral
Brown	Live

## Installing a Power Cord Cap

Your SeaChanger Plasma Profile and Wash ships with a power cord that must be connected to a standard cord cap. Different locations may require a different power cord cap to connect the fixture to a power source. Because of the variety of power cord caps used worldwide, SeaChanger Plasma Profile and Wash cannot make specific recommendations for the power cord cap. Contact a local authority for the type of power cord cap needed.

The SeaChanger Plasma Profile and Wash has a universal power supply onboard that allows for connection to a wide variety of main power sources. Refer to the [Specifications](#) section for details.

When installing the power cord cap, note that the cores in the mains lead are colored in accordance with the following code:

Color	Function
Green with Yellow stripe	Ground
Blue	Neutral
Brown	Live

### WARNING

The SeaChanger Plasma Profile and Wash is Class 1 equipment. This equipment must be connected to an earth ground.

### Note

Maximum total color- changer cable length per SeaChanger Plasma Profile and Wash should not exceed 600 ft. (182.9 m).

Le SeaChanger est de catégorie 1 de l'équipement. Cet équipement doit être connecté à une prise de terre.  
Note

Couleur maximale totale par la longueur du câble changeur SeaChanger ne devrait pas dépasser 600 pieds (182,9 m).

## Mounting the SeaChanger Plasma Profile on a Source Four Ellipsoidal Fixture

The SeaChanger Plasma Profile and Wash requires a Philips screwdriver to install. It fits in front of the lens module of the Source Four Ellipsoidal fixture. Perform this procedure *before* you connect the fixture to power.

---

### WARNING

INTENSE HEAT. AVOID CONTACT BY PERSONS AND MATERIALS.

### Danger

---

CHALEUR INTENSE. ÉVITER LE CONTACT PAR DES PERSONNES ET DES MATÉRIAUX.  
PAS POUR UN USAGE RESIDENTIEL

---

### ► Procedure

To install a SeaChanger Plasma Profile using a Source Four ellipsoidal lens barrel:

1. Remove the Source Four from the yoke assembly, setting aside the screws to use in Step 2.
2. Using the same screws, attach the SeaChanger Plasma Profile and Wash as shown in the figure below. Adjust the SeaChanger Plasma Profile and Wash to the desired orientation.
3. Remove the front barrel assembly of the Source Four ellipsoidal fixture by loosening the thumbscrew and the Philips set screw located above and beneath the lens barrel. Rotate the barrel assembly until it releases from the mounting tabs located in the rear housing assembly.
4. Insert the SeaChanger Plasma Profile and Wash into the Source Four rear housing assembly by aligning the mounting tabs into the rear-locking ring of the SeaChanger Plasma Profile and Wash. You must rotate the rear housing until the Source Four mounting tabs are captured in the SeaChanger Plasma Profile and Wash locking ring channels. Tighten the thumbscrew and Philips set screw to lock the module onto the Source Four fixture.
5. Insert the front barrel assembly onto the front locking ring of the SeaChanger Plasma Profile and Wash, engaging the barrel assembly into the locking ring channels.
6. Adjust the front barrel assembly to the desired orientation and tighten the thumbscrew and Philips set screw to lock the front barrel assembly to the SeaChanger Plasma Profile and Wash.
7. Mount the unit using safety cable at the mounting location.

## Color Engine Orientation

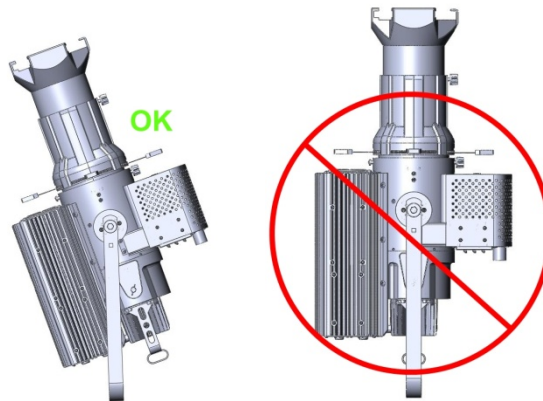
The installed SeaChanger Plasma Profile and Wash can be oriented in either the “in-yoke” or “below-yoke” configurations as shown below:



---

### WARNING

If you are using SeaChanger Plasma Profile and Wash with our extended yoke accessory, you must position the SeaChanger Plasma Profile and Wash at no greater angle than 70 degrees to vertical when the front barrel is pointing upward. This prevents the build-up of excessive lamp heat that can affect SeaChanger Plasma Profile and Wash operation.



The extended yoke accessory can be pointed downward in any orientation, which is very useful for down-lighting and front-of-house installations.

---

## Optimizing Light Field Performance

### Soft Edge Beam on Profile

For optimum performance from SeaChanger Plasma Profile and Wash and the Source Four when you need a soft edge, always move the lens tube out (away from the lamp housing) from the focus point, not towards.

### Adjusting Beam Zoom / Field Angle- Wash Fixture

The wash field size can be adjusted with the manual zoom adjust knob located on the opposite side of the lens housing from the drive enclosure. Simply loosen and move the knob forward (in the direction of the output Fresnel lens) for 50 degree wide field coverage or to the rear towards the lamp housing) for a tight 20 degree field with superior edge softness. When the desired wash field is obtained, simply retighten the knob to set the adjustment.

## Determining a Valid DMX Base Address

The DMX base address (start channel) identifies each fixture on a link for the DMX controller. There are 512 available channels on each DMX link. These 512 channels are divided among *all* the devices on a particular link. The number of channels a fixture requires is called the fixture's channel range. The DMX base address assigned to a particular fixture is the first channel available to a fixture in its channel range. The fixture's channel range must not overlap any other device's channel range on the link. When two devices on the same DMX link have overlapping channel ranges, one or both devices will be disabled or behave erratically.

Remember the following criteria when determining a valid base address:

- The base address is the number of the first channel in a consecutive block of channels assigned to an individual fixture.
- If you want two or more fixtures to respond to controller commands in exactly the same way, you can assign them the same base address. In that case, those fixtures must be the same type and must share the *entire* channel range.
- A fixture can be assigned the second block of DMX channels on a link without physically being the second fixture on the link.
- To avoid overlapping channels, place the start channel at the beginning of a range of available channels large enough to accommodate that fixture type.
- Every channel in the link does not need to be assigned.
- The channel range required for a fixture differs depending on the fixture type. The SeaChanger Plasma Profile and Wash uses a DMX block of 6 contiguous channels.

## Setting the Base DMX Address

The SeaChanger Plasma Profile and Wash is a six channel DMX device, and requires that a contiguous block of six DMX addresses be available. The display panel or RDM input is used to enter the DMX base address of the fixture. The first channel is assigned to this base address, and subsequent 5 channels are assigned the next five DMX addresses.

# Chapter 3

## Operation

### Overview

The SeaChanger Plasma Profile and Wash can be operated by a DMX512 controller, RDM (Remote Device Management) device, or from the front panel display.

### Power and DMX Connections

The SeaChanger Plasma Profile and Wash has a self-contained universal AC/DC power supply, permitting connection to single-phase power sources with a voltage range of 110 – 240 VAC, at a frequency of 50 – 60 Hz.

The DMX I/O connectors are 5-pin XLR type, and are connected in a pass-through arrangement to enable daisy chaining of multiple fixtures. Either connector can function as an input or output. An external terminator plug (not supplied) is recommended for the last fixture in a DMX cable run.

### SeaChanger Plasma Profile and Wash Display and Control Buttons

The SeaChanger Plasma Profile and Wash features a 3-digit LED display and corresponding panel buttons for numeric entry. Each button push increments the corresponding digit by 1, and from 9 back to 0. Addresses and functions programmed via the display panel take effect after a 3 second delay. On power-up, the firmware version number is displayed momentarily.

### DMX Signal Indicator

The SeaChanger Plasma Profile and Wash display will show a decimal point if a DMX signal is present. The decimal point will go out when signal is not present or removed.

### Display Blanking

The SeaChanger Plasma Profile and Wash display will blank the digits after a 5-minute delay. The DMX signal indicator (decimal point) will remain on as long as a DMX signal is present. The display can be powered on by pushing any of the display buttons once while blanked.

### USITT DMX512-A Manufacturer ID

All SeaChanger Plasma Profile and Wash DMX512 addressable fixtures have an ESTA registered Manufacturer's ID of ASCII "SC" (decimal 83 & 67, or 53h 43h in hex).

See [http://www.esta.org/tsp/working\\_groups/CP/mfctrlIDs.php](http://www.esta.org/tsp/working_groups/CP/mfctrlIDs.php).

## DMX Control

When connected to a suitable DMX controller, the SeaChanger Plasma Profile and Wash can be operated via six DMX channels. The channels are assigned as in Table 1 below:

**Table 1 – SeaChanger Plasma Profile and Wash DMX Channel Map**

Channel	Name	Parameter	Percent Range	DMX Range	Hex Range	Reset Default Percent Value
1	Cyan	Color Saturation	0 – 100%	0 – 255	0 – FF	0% Full clear
2	Magenta	Color Saturation	0 – 100%	0 – 255	0 – FF	0% Full clear
3	Yellow	Color Saturation	0 – 100%	0 – 255	0 – FF	0% Full clear
4	Standard: Patterned AI douser	Gradient Dimmer	0 – 99%	0 – 255	0 – FF	100% Full clear
5	Lamp Output	Draw Down W/Douser	20 - 100%	0 – 255	0 – FF	
6	Lamp Strike / Douse	Remote Lamp Strike	0 – 100%	0 – 255	0 – FF	

## Lamp Cold Strike / Hot Re-strike

### 1) DMX Cold Strike:

When cold-striking the lamp, the DMX Lamp Strike/Douse Channel 6 must be set and held at “0” DMX (Douse) while the line power is applied and the onboard electronics are initialized. After 15 seconds, Channel 6 can be increased to “255” DMX (Strike) to begin the lamp strike sequence.

### 2) DMX Hot Re-strike:

In case of power interruption or accidental dousing when the lamp has been operating for more than 10 minutes, the DMX Lamp Strike/Douse Channel 6 must be set and held at “0” DMX (Douse) after power is reapplied and the onboard electronics are initialized. After 180 seconds, Channel 6 can be increased to “255” DMX (Strike).

## Reset from DMX Console

When connected to a suitable DMX controller, the SeaChanger Plasma Profile and Wash filter wheel positions can be reset from the console by a two step dwell and snap as shown in Table 2 below:

**Table 2 – SeaChanger Plasma Profile and Wash Reset Procedure**

Channel	Name	Dwell (+3 sec) (% / DMX / hex)	Snap (% / DMX / hex)	Reset Default Percent Value
1	Cyan	100% / 255 / FF	0% / 0 / 0	0% Full clear
2	Magenta	100% / 255 / FF	0% / 0 / 0	0% Full clear
3	Yellow	100% / 255 / FF	0% / 0 / 0	0% Full clear
4	Optional Douser (Model SEA-DM)	0% / 0 / 0	0% / 0 / 0	0% Full Dark

## Keypad Control

The SeaChanger Plasma Profile and Wash keypad and LED display provides another interface to set the fixture base address, select the operating mode, and program settings. Settings take effect after a three second delay. These parameters are shown in Table 3.

## RDM Control

The SeaChanger Plasma Profile and Wash is RDM (Remote Device Management) compliant to [ANSI E1.20-2006](#), “Entertainment Technology--Remote Device Management over USITT DMX512”. RDM allows the SeaChanger Plasma Profile and Wash base DMX address to be remotely set, and the operating mode or fixture settings to be changed. Available functions are listed in Table 3a for the SeaChanger Plasma Profile and Wash xG and in Table 3b for the SeaChanger Plasma Profile and Wash DM (optional patterned aluminum douser wheel).



**Table 3b – SeaChanger Plasma Profile and Wash DM (Douser) Keypad / RDM Control Functions**

Input	Function	Type
001-509	Set Fixture Base Addresses	Modal
800	24 Color Demo Mode	Modal
900	Dimmer in Full	Modal
901	Cyan Full	Modal
902	Magenta Full	Modal
903	Yellow Full	Modal
904	All Out (Clear)	Modal
905	L182-Light Red	Modal
906	R4490-90 Green	Modal
907	R2008 Storaro Indigo	Modal
908	L444-eEighth straw	Modal
909	R20 Medium Amber	Modal
910	AP775 Sailors Delight	Modal
911	L172 Lagoon Blue	Modal
912	R4990 90 lavender	Modal
913	L68- Sky Blue	Modal
914	R316 Gallo Gold	Modal
915	L052Light Lavender	Modal
916	AP7850 Hot Lava Orange	Modal
917	AP7850 Hot Lava Orange	Modal
918	R49 Medium Purple	Modal
919	R2004	Modal
920	R22 Medium Purple	Modal
921	L144-No Color Blue	Modal
922	R2009 Storaro Violet	Modal
923	L197 Alice Blue	Modal
924	R16 Light Amber	Modal
925	L194 Surprise Pink	Modal
<b>Action Keypad</b>		
990	Reset all Wheels	Action
991	Reset Cyan	Action
992	Reset Magenta	Action
993	Reset Yellow	Action
994	Reset Dimmer/ Xg	Action
701	Display Orientation -Up position	Action
702	Display Orientation -Down position	Action
<p>Modal functions remain in effect until another is selected.  Actions return to the current mode after execution.  Gel Match functions 901 – 903 and 905 - 925 are based on  Osram HPL750/115 lamp.  Functions take effect after a 3 second delay.</p>		

## Demo Mode

The SeaChanger Plasma Profile and Wash demo mode provides for color changing without a DMX controller attached. Selection of “800” via RDM or keypad starts the demo mode. The fixture will sequence through the colors in Table 4b for the SeaChanger Plasma Profile and Wash DM (optional patterned aluminum douser wheel) below, with a four second dwell time at each color. Custom demo color tables are available at the time of order; please contact SeaChanger Plasma Profile and Wash for more information.

**Table 4b – SeaChanger Plasma Profile and Wash DM (Douser) Demo Sequence**

Sequence Number	Function	RDM/Keypad Equivalent
1	Cyan Full	901
2	Magenta Full	902
3	Yellow Full	903
4	L182-Light Red	905
5	R4490-90 Green	906
6	R2008 Storaro Indigo	907
7	L444-eEighth straw	908
8	R20 Medium Amber	909
9	AP775 Sailors Delight	910
10	L172 Lagoon Blue	911
11	R4990 90 lavender	912
12	L68- Sky Blue	913
13	R316 Gallo Gold	914
14	L052Light Lavender	915
15	AP7850 Hot Lava Orange	916
16	AP7850 Hot Lava Orange	917
17	R49 Medium Purple	918
18	R2004	919
19	R22 Medium Purple	920
20	L144-No Color Blue	921
21	R2009 Storaro Violet	922
22	L197 Alice Blue	923
23	R16 Light Amber	924
24	L194 Surprise Pink	925

Gel Match demo colors 1 - 24 are based on Osram HPL750/115 lamp.  
To cancel demo mode, select a DMX base address between 1 and 509 via RDM or keypad.

## Error Codes

The SeaChanger Plasma Profile and Wash display can provide error codes for troubleshooting purposes. A list of the error code and the description is below:

**Table 5 – SeaChanger Plasma Profile and Wash Error Codes**

Error Code	Description
E01	Lamp start failure
E02	Lamp overtemp shutdown
E03	Lamp shutdown while running
E04	Lamp driver
E05	Lamp voltage low
E06	Lamp current low
E07	Lamp driver communication lost

# Appendix A

## SeaChanger Plasma Profile and Wash Specifications

<b>Mechanical</b>		
Height	419 mm (16.5 in.)	Wash and Profile
	178 mm (7.0 in.)	Wash and Profile
Length	438 mm (17.25 in.) Profile / 521 mm (20.5 in.) Wash	
Shipping Weight	15.9 kg (35 lbs.) Profile / 17.2 kg (38 lbs) Wash	
Actual Product Weight	13.2 kg (29 lbs.) Profile / 14.5 kg (32 lbs) Wash	
<b>Electrical</b>	Non-dimming circuit for Wash and Profile 100/240 VAC, 50/60 Hz (auto-sensing) 2.9 Amps @ 110 VAC, 1.3 Amps @ 240 VAC (320W)	
<b>Environmental</b>		
Maximum Ambient Temperature	45 °C (113 °F)	Wash and Profile
Minimum Ambient Temperature	0 °C (32 °F)	Wash and Profile
Maximum Exterior Surface Temperature*	200 °C (392 °F)	Wash and Profile
Cooling	Temperature controlled PWM cooling fan for Wash and Profile	
<b>LAMP</b>		
Type*	LUXIM LIFI® Plasma Emitter Wash and Profile	
<b>Control, Cabling and Terminator</b>		
SeaChanger Data Link	Wash and Profile  DMX512 male and female 5-Pin XLR with DMX signal pass through for daisy-chaining  Remote Device Management (RDM) per ANSI E1.20-2006 DMX start address can be set via RDM or onboard display	
Maximum Recommended Cable Length	182.9 m (600 ft.) Wash and Profile	

Compatible Terminator	120 ohms Wash and Profile
SeaChanger Onboard Keypad / Display	Wash and Profile Three button shielded membrane keypad with three digit, seven segment LED display and DMX signal indicator
<b>Operating Features for <u>Wash and Profile</u></b>	
Color Filter Type, Range and Control	Channel 1 - Cyan: 0-100% saturation Channel 2 - Magenta: 0-100% saturation Channel 3 - Yellow: 0-100% saturation Channel 4 - standard - patterned Al douser: 0-99% dimming Channel 5 - Lamp dimming 20 - 100% Channel 6 - Lamp strike/douse  Dichroic patterned CMY and coatings on optical glass substrates, BBAR coated, in-band transmission > 98%  Patterned aluminum douser with dielectric enhancement, on optical glass substrate
Speed	0.8 sec average clear to full saturation Onboard drive electronics with adaptive speed response
Accessory Compatibility	<u>Profile</u> -Preserves all ETC Source Four beam characteristics and compatibility with all beam-shaping ETC Source Four accessories such as gobos; gobo rotators; gobo changers; and 10,14,26,36,50,70 and 90 degree field-of-view barrels; and other beam shaping devices <u>Wash</u> - Optional Accessory mounting bracket for Barn Door Attachment
Mounting	Suspension on Source Four compatible yoke from mounting points
Maintenance	Easy color engine removal for periodic cleaning
Safety	Safety cable ring, 3' safety cable included
<ul style="list-style-type: none"> <li>For more information, see the documentation for the ETC™ Source Four fixture.</li> <li>LIFI is a registered trademark of LUXIM® Corporation</li> </ul>	

## RoHS-Restriction of Hazardous Substances

SeaChanger Plasma Profile and Wash and SeaChanger Plasma Profile and Wash products comply with RoHS and do not contain any of the six banned substances: lead, mercury, cadmium, hexavalent chromium, poly-brominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE), in quantities exceeding maximum concentration values.

## RoHS-Restriction des Substances Dangereuses

SeaChanger et produits SeaChanger se conformer aux directives RoHS et ne contiennent aucune des six substances interdites: le plomb, le mercure, le cadmium, le chrome hexavalent, les poly-bromés (PBB) ni de polybromodiphényléthers (PBDE), en quantités n'excédant valeurs maximales de concentration

### Seachanger CE Declaration of Conformance

We declare under our sole responsibility that the product  
Equipment Classification: Stage Lighting Devise  
Equipment type: Color Changer  
Model: A451-24-\*\* SeaChanger, Profile, Color Engine  
A451-01-\*\* SeaChanger, Profile, Fixture  
A474-24-\*\* SeaChanger, Wash, Color Engine  
A474-01-\*\* SeaChanger, Wash, Fixture  
Manufactured at:  
**Ocean Thin Films, Inc.**  
**8060 Bryan Dairy Road**  
**Largo, Florida 33777**  
that this declaration relates in conformity with the following standards:  
EN61000-6-3:2001; EN55022; FCC part15; EN61000-3-2:1995, EN61000-3-3:1994;EN61000-6.1:2001; EN61000-4-2; EN61000-4-3; EN61000-4-4; EN61000-4-5; EN 610004-6;EN61000-4-6; EN61000-4-8; EN 610004-11  
RoHs Directive 2002/95/EC  
WEEE Directive 2002/96/EC  
Part 15 of FCC Rules  
Technical documents are maintained at Ocean Thin Films, Largo, Florida and will be made available upon request.

# Appendix B

## Maintenance

### Cleaning the SeaChanger Plasma Profile and Wash Dichroics

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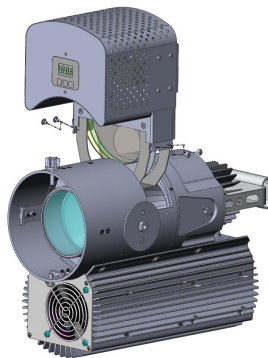
#### **WARNINGS**

Disconnect power and turn power switch off before servicing.

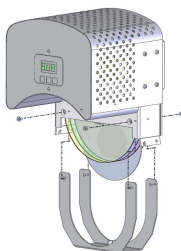
Equipment surfaces may reach temperatures up to 45° C (113° F). Allow the fixture to cool before handling.

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Remove the SeaChanger Plasma Profile and Wash color engine from the lens tube assembly by removing (4) Philips screws and extracting the color engine as shown:



The filters can be easily accessed by removing (4) Philips screws and pulling the protective cage away from the color engine as shown below:



Clean the dichroic glass filters using a mild glass cleaner (containing no ammonia) and a soft, lint-free cotton cloth or swab.

Reverse the above steps for reassembly. When reassembling, ensure that the cage is oriented in the same direction as it was removed; the cage has a retaining slot for the aperture stop that will bend the aperture stop out of position if installed incorrectly.

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## Parts List

<b>AEL451-03</b>	Sensor Cable
<b>AEL451-06A</b>	Main Board-Legacy
<b>AEL451-06</b>	Main Board-Speedster
<b>AEL451-07</b>	DMX Board
<b>AEL451-08A</b>	Display Board-Legacy
<b>AEL451-08</b>	Display Board-Speedster
<b>AEL451-09</b>	DMX Cable
<b>AEL451-10A</b>	Display Cable-Legacy
<b>AEL451-10</b>	Display Cable-Speedster
<b>AEL451-11A</b>	DC Power Cable-Legacy
<b>AEL451-11</b>	DC Power Cable-Speedster
<b>EL451-20</b>	Power Supply
<b>EL451-20A</b>	XP Power supply for Speedster
<b>SA451-08</b>	Sensor Board Assembly
<b>SA451-11-01</b>	Motor Assembly - Amber (motor/shaft/pulley/mount)
<b>SA451-11-02</b>	Motor Assembly - Cyan (motor/shaft/pulley/mount)
<b>SA451-11-03</b>	Motor Assembly - Magenta (motor/shaft/pulley/mount)
<b>SA451-11-04</b>	Motor Assembly - XG / DM (motor/shaft/pulley/mount)
<b>SA451-23</b>	Membrane Switch Assembly
<b>ME451-57</b>	Safety Bracket
<b>OP474-5</b>	Fresnel Lens for Wash
<b>STK451-58</b>	Timing Belt, .080" MXL, 130 Teeth
<b>STK451-59</b>	Timing Belt, .080" MXL, 112 Teeth
<b>SA533-04A</b>	Plasma power supply
<b>SA533-05A</b>	Plasma Lamp Assembly
<b>AEL 533-09</b>	RF Generator with Wires



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